

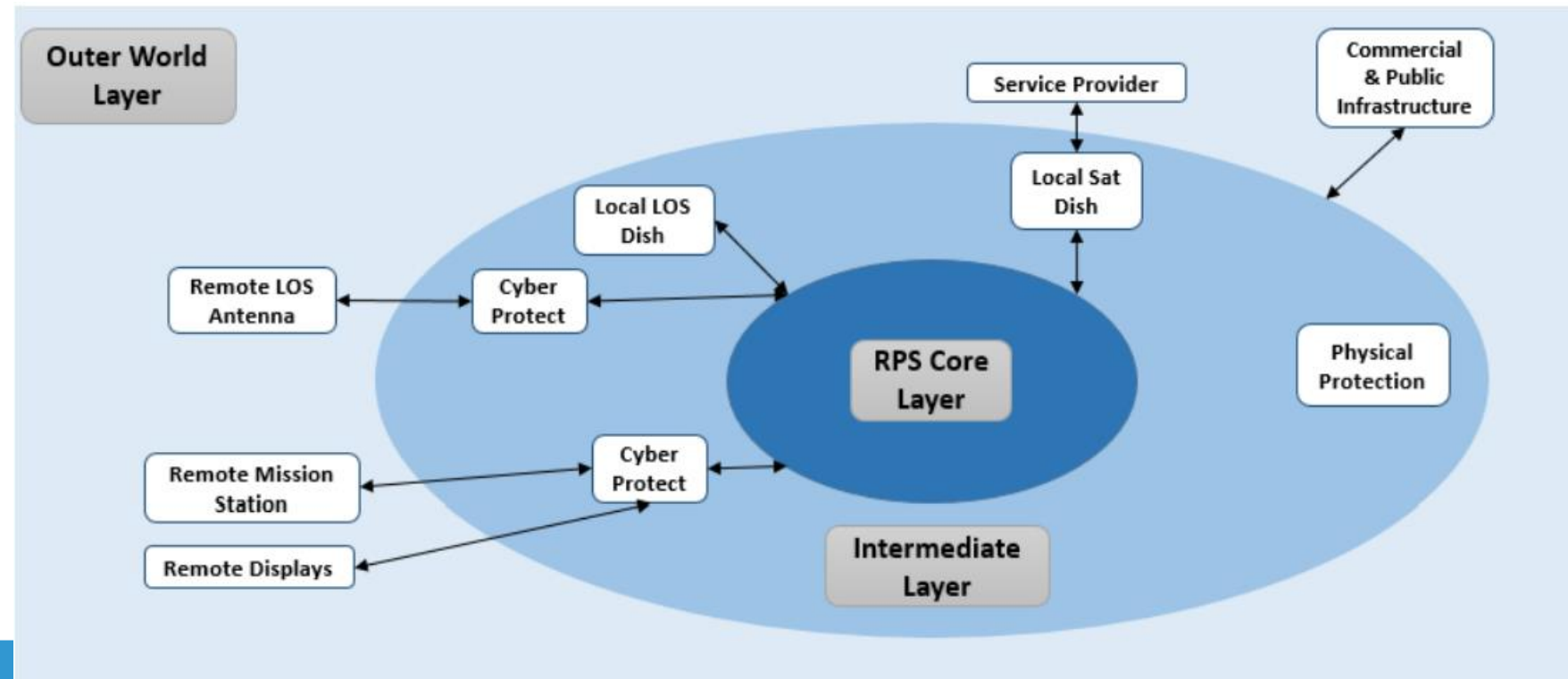
Certifying RPAS and Their Components (Remotely Piloted Aircraft, Remote Pilot Station, C2 Link)

ICAO RPAS Symposium 2022

Ailton José de Oliveira Junior

- RPAS definition
 - **Remotely piloted aircraft system (RPAS).** A remotely piloted aircraft, its associated remote pilot station(s), the required C2 Link(s) and any other components as specified in the type design.
- TC for RPA includes RPS and C2 Link

- May have its own TC (similar to engine) or “equivalent document”
 - Annex 8 Part X
- Integration/connection aspects to be demonstrated by RPA TC holder
 - Annex 8 Parts VIII/IX Chapter 10
- Layers concept



- May have its own TC (similar to engine) or “equivalent document”
 - Annex 8 Part X
- Integration/connection aspects to be demonstrated by RPA TC holder
 - Annex 8 Parts VIII/IX Chapter 10
- Layers concept
- Proportionality when addressing smaller UA
 - Use of support hardware (laptops, for example) may be acceptable to a larger extent

- Needs to be specified by RPA designer to the extent necessary to demonstrate compliance with Annex 8
 - Comparison with fuel
- Type design may allow flexibility for operator select C2 Link service provider (flight phase, geographical coverage, etc)

Example – Speedbird DLV-1 Neo

- MTOW: 12.5 kg
- Payload: 2.5 kg
- Drone delivery
- BVLOS (3 km)
- Below 400 ft AGL



Example – Speedbird DLV-1 Neo

- Design Authorization Data Sheet (DADS)



DESIGN AUTHORIZATION DATA SHEET Nº ERPAS-6680981

Authorization Holder:

SPEEDBIRD VEICULOS AEREOS NÃO TRIPULADOS S/A
Rua Ângela Rosa Scarabuci, 1919
Jardim Ângela Rosa, Franca/SP
14403-610
Brazil

ERPAS-6680891-01
Sheet 01

SPEEDBIRD
DLV-1 NEO

16 Aug 2022

This data sheet, which is part of Design Authorization Process No. 00066.005106/2021-78, prescribes conditions and limitations under which the product, for which the Design Authorization was issued, meets the requirements of the Brazilian Civil Aviation Special Regulation RBAC-E No. 94 Amdt. 02, Subpart E.

I - Model DLV-1 NEO, authorized in Jan 2022.

RPAS	This is a Remotely Piloted Aircraft System (RPAS) that is comprised of a Remote Piloted Aircraft (RPA), a Remote Pilot Station (RPS) and Droneports.	
RPA	Type:	Multicopter, Hexacopter.
	Span:	1,512 mm (59.5 in).
	Height:	520 mm (20.5 in).
	Material:	Carbon fiber & composite parts.

Example – Speedbird DLV-1 Neo

- RPS (C2 Link)

RPS

Speedbird DLV-1 NEO Remote Pilot Station

Type: PC compatible running the software Cloud Control Station
Wi Fi connection to 5GHz Router

Flight planning & execution software:
Cloud Control Station v2.0 or later approved version.

Sub-Assembly: 4G LTE Ground Antenna:
SpeedBird PN: DLVIN-14.10
ANATEL Homologation Certificate: 06949-17-04809
(See Note 9).



Example – Speedbird DLV-1 Neo

- Droneport

Speedbird DLV-1 NEO Smart Droneport
Type: Smart Droneport and precision landing

Sub-Assembly:

4G LTE Antenna:

SpeedBird PN: DLVIN-14.10

ANATEL Homologation Certificate: 06949-17-04809
(See Note 9).

Power Supply:

SpeedBird PN: DLVIN14.07

Precision Marker:

SpeedBird PN: DLVIN14.11

Companion Computer SDP:

Speedbird PN: DLVIN-14.05

Controller:

Speedbird PN: DLVIN-14.03

Software version: v4.0.7

GNSS Receiver

Speedbird PN: DLVIN-34.5701

Software version: v3.0.1

Reflector

Speedbird PN: DLVIN-14.12



<https://www.gov.br/anac/en/topics/drones>
ailton.junior@anac.gov.br